

DECLARATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled SCANNING OPTICAL DETECTION SYSTEM

the specification of which

(Check One): is attached hereto.
 X was filed on May 1, 1997 as
 Application Serial No. 08/846,876
 and was amended on (if applicable) September 18, 1997

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 printed on the reverse side of this Declaration. I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Application No.	Country	Date of Filing	Priority Claimed	
			Yes	No

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

Application No.	Date of Filing	Status-Patented, Pending or Abandoned
CIP of Serial No. 08/534,454, which is a CIP of 08/304,657, which is a CIP of 08/271,882, which is a CIP of 08/146,504	September 27, 1995 September 9, 1994 July 7, 1994 November 1, 1993	Pending Patented as 5,632,957 Pending, allowed Patented as 5,605,662

APPLICABLE STATUTES & RULES

37 CFR 1.56: DUTY TO DISCLOSE INFORMATION MATERIAL TO PATENTABILITY.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by ss 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
 - (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
- (b) Under this section information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and
- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
 - (2) It refutes, or is inconsistent with, a position the applicant takes in;
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
- (1) Each inventor named in the application;
 - (2) Each attorney or agent who prepares or prosecutes the application; and
 - (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

35 U.S.C. 102: CONDITIONS FOR PATENTABILITY; NOVELTY AND LOSS OF RIGHT TO PATENT

A person shall be entitled to a patent unless--

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or
- (c) he has abandoned the invention, or
- (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or
- (f) he did not himself invent the subject matter sought to be patented, or
- (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

35 U.S.C. 103: CONDITIONS FOR PATENTABILITY; NON-OBVIOUS SUBJECT MATTER

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

35 U.S.C. 119: BENEFIT OF EARLIER FILING DATE IN FOREIGN COUNTRY; RIGHT OF PRIORITY (Applicable Portion)

An application for patent for an invention filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same invention in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for a patent for an invention which has been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing.

35 U.S.C. 120: BENEFIT OF EARLIER FILING DATE IN THE UNITED STATES

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, by the same invention shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

35 U.S.C. 112: SPECIFICATION (Applicable Portion)

The Specification shall contain a written description of the invention, and of the making and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctive claiming the subject matter which the applicant regards as his invention.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

Full name of sole or first inventor **ROBERT D. JUNCOSA**

Inventor's signature

Robert D. Juncosa

Date 9/26/97

Country of Citizenship USA

Residence Mission Viejo, California

Post Office Address 26892 Via Grande, Mission Viejo, California 92691

Full name of second joint inventor **WILLIAM F. BUTLER**

Inventor's signature

William F. Butler

Date 9/26/97

Country of Citizenship USA

Residence Carlsbad, California

Post Office Address 7577 Caloma Circle, Carlsbad, California 92009

Full name of third joint inventor **LEI WU**

Inventor's signature

Lei Wu

Date 10/21/97

Country of Citizenship China

Residence San Diego, California

Post Office Address 14021 Capewood Lane, San Diego, California 92128

Full name of fourth joint inventor **ROBERT H. CORMACK**

Inventor's signature

Robert H. Cormack

Date 10/26/97

Country of Citizenship USA

Residence Boulder, Colorado

Post Office Address 5305 Holmes Place, Boulder, Colorado 80303

(Signatures should conform to names as presented at 201 et seq. above)

00927820 028/2660

POWER OF ATTORNEY

Docket 223/024
Patent

Nanogen, Inc., assignee(s) of the application for United States Letters Patent for _____

SCANNING OPTICAL DETECTION SYSTEM

(Title)

by Robert D. Juncosa; William F. Butler; Lei Wu; and Robert H. Cormack

(Inventors)

_____ executed on even date herewith, or

X having Serial No. 08/846,876, filed May 1, 1997,

a copy of the assignment of which is attached hereto, do(es) hereby appoint as attorneys of record with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

The registered attorneys listed below and members of or associates in the law firm of **LYON & LYON**, 633 West Fifth Street, Suite 4700, Los Angeles, California 90071, Registration No. **11,611**, whose members are all admitted to the Bar of the State of California:

Roland N. Smoot
Conrad R. Solum, Jr.
James W. Geriak
Robert M. Taylor, Jr.
Samuel B. Stone
Douglas E. Olson
Robert E. Lyon
James J. Short
Robert C. Weiss
Richard E. Lyon, Jr.
John D. McConaghy
William C. Steffin
Coe A. Bloomberg

Reg. No. 18,718
Reg. No. 20,467
Reg. No. 20,233
Reg. No. 19,848
Reg. No. 19,297
Reg. No. 22,798
Reg. No. 24,171
Reg. No. 25,922
Reg. No. 24,939
Reg. No. 26,300
Reg. No. 26,773
Reg. No. 26,811
Reg. No. 26,605

J. Donald McCarthy
John M. Benassi
James H. Shalek
Allan W. Jansen
Robert W. Dickerson
Roy L. Anderson
David B. Murphy
James C. Brooks
Jeffrey M. Olson
Steven D. Hemminger
Jerold B. Reilly
John A. Rafter
Kenneth H. Ohriner

Reg. No. 25,119
Reg. No. 27,483
Reg. No. 29,749
Reg. No. 29,395
Reg. No. 29,914
Reg. No. 30,240
Reg. No. 31,125
Reg. No. 29,898
Reg. No. 30,790
Reg. No. 30,755
Reg. No. 32,293
Reg. No. 31,653
Reg. No. 31,646

Mary S. Consalvi
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Hope E. Melville
Richard J. Warburg
Michael J. Wise
Kurt T. Mulville
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Corrine M. Freeman
John C. Kappos
Kenneth S. Roberts
Charles C. Fowler
James K. Sakaguchi
Lorraine Linford

Reg. No. 32,212
Reg. No. 35,579
Reg. No. 38,948
Reg. No. 34,206
Reg. No. 34,923
Reg. No. 34,874
Reg. No. 32,327
Reg. No. 34,047
Reg. No. 37,194
Reg. No. 35,833
Reg. No. 37,625
Reg. No. 37,861
Reg. No. 38,283
Reg. No. 39,675
Reg. No. 41,285
Reg. No. 35,939

Address correspondence to:

LYON & LYON

Attention: David B. Murphy

633 West Fifth Street, Suite 4700

Los Angeles, California 90071-2066

(213) 489-1600

I, the undersigned, declare that I am the (an) assignee of the above-identified application or, if the assignee is a corporation, partnership or other association, I am authorized to make this appointment on behalf of the assignee. The above-identified assignee is the owner of this application by reason of an assignment being filed with the Patent Office for recordation concurrently herewith. In accordance with 37 CFR § 3.373(b), I certify that I have reviewed all documents in the chain of title, and to the best of my knowledge, all right, title, and interest is in the above-identified assignee, and I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full Name of Assignee.	Nanogen, Inc.	
Post Office Address	10398 Pacific Center Court, San Diego, California 92121	
Signature of Declarant or Assignee	<i>Harry J. Lombard</i>	Date 12/3/97

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UNITED STATES DEPARTMENT OF COMMERCE

Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MAY 28, 1998

PTAS

LYON & LYON
DAVID B. MURPHY
633 WEST FIFTH STREET
LOS ANGELES, CA 90071



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**UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/15/1997

REEL/FRAME: 9066/0184
NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

JUNCOSA, ROBERT D.

DOC DATE: 12/04/1997

ASSIGNOR:

BUTLER, WILLIAM F.

DOC DATE: 10/31/1997

ASSIGNOR:

WU, LEI

DOC DATE: 10/21/1997

ASSIGNOR:

CORMACK, ROBERT H.

DOC DATE: 11/11/1997

ASSIGNEE:

NANOGEN, INC.
10387 PACIFIC CENTER COURT
SAN DIEGO, CALIFORNIA 92121

SERIAL NUMBER: 08846876
PATENT NUMBER:

FILING DATE: 05/01/1997
ISSUE DATE:

RECEIVED

JUN 05 1998

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U.S. PROSECUTION

9066/0184 PAGE 2

JEEVON JONES, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

ASSIGNMENT

WHEREAS, We, **ROBERT D. JUNCOSA**, a citizen of the United States, residing at 26892 Via Grande, Mission Viejo, California 92691, **WILLIAM F. BUTLER**, a citizen of the United States, residing at 7577 Caloma Circle, Carlsbad, California 92009, **LEI WU**, a citizen of China, residing 14021 Capewood Lane, San Diego, 92128, and **ROBERT H. CORMACK**, a citizen of the United States, residing at 5305 Holmes Place, Boulder, Colorado 80303, (hereinafter referred to as "ASSIGNORS"), have invented and own a certain invention entitled "**SCANNING OPTICAL DETECTION SYSTEM**", for which application for Letters Patent of the United States of America has been filed on **May 1, 1997**, under Serial No. **08/846,876** and

WHEREAS, **NANOGEN, INC.**, a corporation organized and existing under and by virtue of the laws of the State of California and having its principal place of business at 10398 Pacific Center Court, San Diego, California 92121 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the exclusive right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States of America, its territorial possessions and in any and all countries foreign thereto.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign, transfer and set over unto the said ASSIGNEE, its successors and assigns, the full and exclusive right, title and interest to said invention and to all Letters Patent or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto, to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be

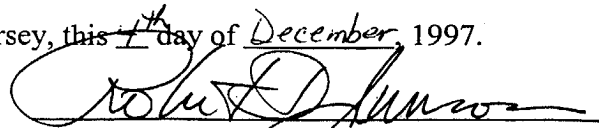
granted, including all priority rights under the International Convention; and ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent and any legal equivalent thereof to said ASSIGNEE, its successors and assigns, in accordance with this Assignment.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment.

ASSIGNORS further covenant that ASSIGNEE will, upon request of ASSIGNEE, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or legal proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its designated legal representative any and all papers, instruments, declarations or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof in any foreign country which may be necessary or desirable to carry out the purposes thereof.

09927820-080901

WITNESS my hand at Princeton, New Jersey, this 4th day of December, 1997.


Robert D. Juncosa


STATE OF NEW JERSEY)
)
COUNTY OF Mercer)

ss.

On 12/4/97 before me, Debra Babashak, Notary Public, personally appeared Robert D. Juncosa personally known to me OR _ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Seal


Notary Public in and for
said County and State

DEBRA H BABASHAK
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES AUGUST 12 2001

WITNESS my hand at SAN DIEGO, California, this 31st day of OCTOBER, 1997.

William F. Butler
William F. Butler

STATE OF CALIFORNIA)
)
COUNTY OF SAN DIEGO)

ss.

On OCT. 31, 1997 before me, C. CAVINESS, Notary Public, personally appeared WILLIAM F. BUTLER personally known to me OR ~~proved to me on the basis of satisfactory evidence~~ to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

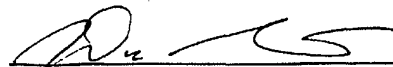
WITNESS my hand and official seal.

Seal



Cheryl J. Caviness
Notary Public in and for
said County and State

WITNESS my hand at San Diego, California, this 21 day of Oct., 1997.



Lei Wu

STATE OF CALIFORNIA)

COUNTY OF SAN DIEGO)

ss.

On 10/21/97 before me, C. CAVINESS, Notary Public, personally appeared LEI WU ☒ personally known to me ~~OR~~ ~~proved to me on the basis of satisfactory evidence to be~~ the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/her/their authorized capacity(~~ies~~), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Seal



Notary Public in and for
said County and State

09927820-02822650

WITNESS my hand at _____, California, this ____ day of _____, 1997.

Robert H. Cormack
Robert H. Cormack

STATE OF CALIFORNIA)
COUNTY OF _____)

ss.

On November 11, 1997 before me, Elaine F. Fowler, Notary Public, personally appeared Robert H. Cormack personally known to me OR _ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Seal

Elaine F. Fowler

Notary Public in and for
said County and State

UCB Libraries
Dean's Office, CB 184
Boulder, CO 80309-0184

My Commission Expires Mar 07, 1998